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**TWO YEAR REPORT DOCUMENTING
COMPLIANCE WITH THE
PREVENTATIVE MAINTENANCE PLAN
ARGYLE MUNICIPAL ELECTRIC UTILITY**

**FILING DEADLINE
FEBRUARY 1, 2003**

RECEIVED

Electric Division

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This report format was prepared by the MEUW work group for PSC Rule 113.0607 for use by the 82 municipal electric utilities in Wisconsin and endorsed by PSC staff as meeting the requirements of Rule PSC 113.0607.

I Reporting Requirements: PSC 113.0607(6) states;

Each utility shall provide a periodic report to the commission showing compliance with its Preventative Maintenance Plan. The report shall include a list of inspected circuits and facilities, the condition of facilities according to established rating criteria, schedules established and success at meeting the established schedules.

II Inspection Schedule and Methods:

SCHEDULE:	MONTHLY	ANNUAL	EVERY 5 YEARS
Transmission (□69Kv)		X	X
Substations	X	X	
Distribution (OH & UG)			X

METHODS: Five criteria groups will be used to complete the inspection of all facilities.

1. IR – infrared thermography used to find poor electrical connections and/or oil flow problems in equipment.
2. RFI - Radio Frequency Interference, a byproduct of loose hardware and connections, is checked using an AM radio receiver.
3. SI – structural integrity of all supporting hardware including poles, crossarms, insulators, structures, bases, foundations, buildings, etc.
4. Clearance – refers to proper spacing of conductors from other objects, trees and conductors.
5. EC – equipment condition on non-structural components such as circuit breakers, transformers, regulators, reclosers, relays, batteries, capacitors, etc.

Distribution facilities will be inspected by substation circuits on a 5 year cycle such that the entire system will be inspected every 5 years. Inspector instructions for inspecting all facilities and forms are included in the plan.

III Condition Rating Criteria

This criterion, as listed below, establishes the condition of a facility and also determines the repair schedule to correct deficiencies .

- 0) Good condition
- 1) Good condition but aging
- 2) Non-critical maintenance required – normally repair within 12 months
- 3) Priority maintenance required – normally repair within 90 days
- 4) Urgent maintenance required – report immediately to the utility and repair normally within 1 week

IV Corrective Action Schedule

The rating criteria as listed above determine the corrective action schedule.

V Record Keeping

All inspection forms and records will be retained for a minimum of 10 years. The inspection form contains all of the required critical information i.e. inspection dates, condition rating, schedule for repair and date of repair completion.

VI Reporting Requirements

A report and summary of this plan's progress will be submitted every two years with the first report due to the Commission by February 1, 2003. The report will consist of a cover letter documenting the percent of inspections achieved compared to the schedule and the percent of maintenance achieved within the scheduled time allowance.

VII Inspected Circuits and Facilities

Circuit # and description	Substation
Circuit S- South side feeder	Argyle 69kV Substation

Base load and peaking generation, less than 50 megawatts per unit in size, is typically subject to pre-operational checks, in addition to checks and maintenance during and after periods of operation. Emergency generation is test run and maintained every *month* to confirm its operational readiness.

VIII Scheduling Goals Established and Success of Meeting the Criteria:

PSC staff expects a narrative listing goals and if they were achieved.

“It was this utility’s goal to complete all monthly substation inspections, annual transmission line inspections and to inspect 25% of the distribution system. In addition, we expected to complete all scheduled maintenance resulting from the inspections within the prescribed time periods specified in the rating criteria.

All of the inspection goals were met. 25% of the distribution system was inspected, (the entire South Circuit). 2 urgent maintenance items were found and repaired within 2 days. Of the 33 priority and non critical maintenance items found, 3 were repaired on time. The remaining 30 are located on a section of the system that will be rebuilt next summer and will be repaired at that time. "

IX Facility condition – rating criteria:

PSC staff is looking for a narrative on the overall condition of the electric utility.

"The entire West Feeder circuit was rebuilt in 2000, with the exception of the underground facilities, which are in excellent condition. The North and East feeders have been rebuilt within the last 10 years and are in excellent condition. The only substation we have was new in 1997 and is in excellent condition, as well as our transmission facilities, which consists of about 1/2 mile of 69kV that was also new in 1997. The 69kV line is inspected by Dairyland Power. Weed and tree control is also handled by Dairyland as is our Annual Substation inspection.

Storm outages have been minimal due to an extensive tree trimming program that we have in effect. Two outages were caused by load growth and have been corrected by upgrading transformers. Circuit reclosers have been installed in 1997 to protect all four feeder circuits.

OVERHEAD DISTRIBUTION INSPECTION FORM

Date 4/14/02 Inspected by RA Sub RA Ckt 5

MAP AREA	STRUCTURE												EQUIPMENT						CLEARANCE						COMMENTS	Date Item Corrected	Corrected By	
LOCATION	Pole Condition/Leaning	Crossarm Condition	Insulators, DE, Pin	Soil Conditions	Pole Steps	Grounds Intact, Molding	Down Guys and Markers	Guy Bond, Insulator	Signs, Loc#, Warning	Customer Equipment	Conductor and Ties	U'Guard/Conduit Cond	RFI Check	Transformer	Switches	Cutouts	Arresters	Terminators	Street Light	Tree Trimming	Ground Line Clearances	Building Clearances	Streets, Roads, Alleys	Communication Clearance				
56-33	2	0	0	0	X	4	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	Pole Rubbed by Truck at Base	4/16/02	RM
56-31	0	0	0	0	X	0	2	0	0	0	0	0	0	X	X	X	X	X	X	0	0	0	0	0	0			
56-28	0	0	0	0	X	0	0	0	0	0	0	0	0	0	X	2	2	0	0	0	0	0	0	0	0	Replace Cutout + move Arresters	4/16/02	RM
56-25	0	0	0	0	X	0	2	0	0	0	2	0	0	X	X	X	X	X	0	0	0	0	0	0	0			
56-23	0	X	0	0	X	1	X	X	0	0	0	0	0	X	X	X	X	X	X	0	0	0	0	0	0			
58-25	0	1	0	X	0	X	X	0	0	0	1	0	0	X	X	0	0	0	0	X	0	0	0	0	0			
59-25	2	3	1	0	X	0	X	X	1	0	3	0	0	X	X	1	X	0	0	0	0	0	0	0	0			
59-21																												
59-18	0	0	0	X	0	4	0	0	0	0	0	0	0	X	X	X	X	X	0	0	0	0	0	0	0	Replace Guy Guard	5/14/02	RM
59-16	1	1	3	0	X	3	X	X	0	0	3	X	0	X	X	X	X	X	1	0	0	0	0	0	0			
59-14	1	1	3	0	X	0	X	X	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
59-12	0	0	3	0	X	3	X	X	0	0	3	0	0	X	X	X	X	X	0	0	0	0	0	0	0			
59-10	2	3	3	0	X	3	3	3	2	0	3	2	0	0	0	3	3	3	X	0	0	0	0	0	0			
56-4	0	0	0	0	X	1	0	0	0	0	0	0	0	0	1	0	2	2	0	0	0	0	0	0	0			
57-18	0	0	0	0	X	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Replace Guy Guard	5/14/02	RM
56-18	0	0	0	0	X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			

OVERHEAD DISTRIBUTION INSPECTION FORM

Date 5/14/02 Inspected by RM Sub Ckt 5

MAP AREA	STRUCTURE												EQUIPMENT					CLEARANCE				COMMENTS					
LOCATION	Pole Condition/Leaning	Crossarm Condition	Insulators, DE, Pin	Soil Conditions	Pole Steps	Grounds Intact, Molding	Down Guys and Markers	Guy Bond, Insulator	Signs, Loc#, Warning	Customer Equipment	Conductor and Ties	U'Guard/Conduit Cond	RFI Check	Transformer	Switches	Cutouts	Arresters	Terminators	Street Light	Tree Trimming	Ground Line Clearances	Building Clearances	Streets, Roads, Alleys	Communication Clearance	Rating Criteria 0) Good Condition 1) Good Condition but aging 2) Non-critical Maintenance Required 3) Priority Maintenance Required 4) Urgent Maintenance Required	Date Item Corrected	Corrected By
S3-18	0	0	0	0	X	0	0	0	0	0	0	0	0	X	X	X	X	X	0	0	0	0	0	0			
S2-18	0	0	0	0	X	0	0	0	0	0	0	0	0	X	X	X	X	X	0	0	0	0	0	0			
S1-18	0	0	0	0	X	0	0	0	0	0	0	0	0	X	X	0	0	0	0	0	0	0	0	0			
S1-20	0	0	0	0	X	0	0	0	0	0	0	0	0	X	X	X	X	X	0	0	0	0	0	0			
S1-23	0	0	0	0	X	0	0	0	0	0	0	0	0	X	X	X	X	X	0	0	0	0	0	0			
S1-25	0	0	0	0	X	0	0	0	0	0	0	0	0	X	X	0	0	0	0	0	0	0	0	0			
S1-29	0	0	0	0	X	0	1	0	0	0	0	0	0	X	0	0	0	0	0	0	0	0	0	0			
S1-32	0	0	0	0	X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
W1-34	0	0	0	0	X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
S8-33	0	0	0	0	X	0	0	0	0	0	0	0	0	0	X	0	0	0	0	0	0	0	0	0			
S9-33	1	0	0	0	X	0	0	0	0	0	0	0	0	X	X	X	X	X	0	0	0	0	0	0			
S11/33	0	0	0	0	X	1	0	0	0	0	0	1	0	0	X	0	0	0	0	0	0	0	0	0			
S13/33	0	0	0	0	X	0	0	0	0	0	0	0	0	0	X	0	0	0	0	0	0	0	0	0			
S15/34	0	0	0	0	X	0	0	0	0	0	0	0	0	0	X	0	0	0	0	0	0	0	0	0			

ANNUAL SUBSTATION INSPECTION FORM

Date 12/27/02 Inspected by Larry Miller Substation ARGYLE

EQUIPMENT LISTING	SUBSTATION INSPECTION CRITERIA							COMMENTS	MAINTENANCE COMPLETED	
	Check equipment for level	Check condition of concrete pads	Perform oil and DGA analysis	Battery checks - Intercell strap resistance, Individual cell voltages, Cell specific gravity	Nameplate legible	Equipment paint condition	Proper identification labels		IR / RFI scans and checks	Date Item Corrected
Transformer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
LTC or regulators	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
High Voltage Breaker	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Feeder CBs / Reclosers										
North	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
South	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
East	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
West	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Switches										
Control house battery										
Transmission line RFI								<input type="checkbox"/>		

Rating Criteria
 0) Good Condition
 1) Good Condition but aging
 2) Non-critical Maintenance Required
 3) Priority Maintenance Required
 4) Urgent Maintenance Required

Date 1/3/03 Inspected by RM Sub ARGYLE Ckt

MEUW - Preventative Maintenance Plan Format

MONTHLY SUBSTATION INSPECTION SUMMARY

INSPECTED BY: *Lenny Mante*

DATE:

SUBSTATION: ARGYLE

TRANSFORMER MAIN TANK														DATE	CORRECTED
	January	February	March	April	May	June	July	August	September	October	November	December	COMMENTS	CORRECTED	BY
Inspected x															
Overall Rating	0	0	0	0	0	0	0	0	0	0	0	0			
Oil in Bushings	x	x	x	x	x	x	x	x	x	x	x	x			
Bushing and Arrestor	x	x	x	x	x	x	x	x	x	x	x	x			
Oil Leaks	x	x	x	x	x	x	x	x	x	x	x	x			
Main Tank	x	x	x	x	x	x	x	x	x	x	x	x			
Sample Valves	x	x	x	x	x	x	x	x	x	x	x	x			
Radiators	x	x	x	x	x	x	x	x	x	x	x	x			
Radiator Bank	x	x	x	x	x	x	x	x	x	x	x	x			
Tank Pressure	x	x	x	x	x	x	x	x	x	x	x	x			
Tank Oil Level	x	x	x	x	x	x	x	x	x	x	x	x			
Temperature Gauge	x	x	x	x	x	x	x	x	x	x	x	x			
Cooling Fans	x	x	x	x	x	x	x	x	x	x	x	x			
VOLTAGE REGULATORS															
Overall Rating	0	0	0	0	0	0	0	0	0	0	0	0			
Tank Oil Level	x	x	x	x	x	x	x	x	x	x	x	x			
Drag Hand Positions															
A	4	5	4	4	2	2	2	2	3	3	4	4			
B	4	4	4	4	1	2	1	3	3	3	3	4			
C	5	6	6	7	3	3	3	3	5	5	5	5			
Operation Count															
A															
B															
C															
Tank Pressure	x	x	x	x	x	x	x	x	x	x	x	x			
Cabinet Contamination	x	x	x	x	x	x	x	x	x	x	x	x			

MONTHLY SUBSTATION INSPECTION SUMMARY

INSPECTED BY:

DATE:

SUBSTATION:

ARGYLE

HIGH VOLTAGE CIRCUIT BREAKER / CIRCUIT SWITCHER

Inspected x													COMMENTS	DATE CORRECTED	CORRECTED BY
	January	February	March	April	May	June	July	August	September	October	November	December			
Overall Rating	0	0	0	0	0	0	0	0	0	0	0	0			
OPEN/CLOSED Indicator	X	X	X	X	X	X	X	X	X	X	X	X			
CHARGE/DISCHARGE Indicator	X	X	X	X	X	X	X	X	X	X	X	X			
Operations Counter	X	X	X	X	X	X	X	X	X	X	X	X			
Bushings and Supports	X	X	X	X	X	X	X	X	X	X	X	X			
Line and Load Side Disconnect Switches	X	X	X	X	X	X	X	X	X	X	X	X			
Handles Grounded	X	X	X	X	X	X	X	X	X	X	X	X			
Emergency Trip Button	X	X	X	X	X	X	X	X	X	X	X	X			
Spring Operated Mechanism	X	X	X	X	X	X	X	X	X	X	X	X			
Oil Level Gauge	X	X	X	X	X	X	X	X	X	X	X	X			
Tank Oil Leaks	X	X	X	X	X	X	X	X	X	X	X	X			
Reset Switch	X	X	X	X	X	X	X	X	X	X	X	X			
Cabinet Contamination	X	X	X	X	X	X	X	X	X	X	X	X			
Verits Clean	X	X	X	X	X	X	X	X	X	X	X	X			
Gas Pressures for GCBs	X	X	X	X	X	X	X	X	X	X	X	X			

OW VOLTAGE BUSS WORK

Inspected x													COMMENTS	DATE CORRECTED	CORRECTED BY
	January	February	March	April	May	June	July	August	September	October	November	December			
Overall Rating	0	0	0	0	0	0	0	0	0	0	0	0			
Bushing, Insulator, Arrestor, and Supports	X	X	X	X	X	X	X	X	X	X	X	X			
Bird Nests	X	X	X	X	X	X	X	X	X	X	X	X			
Transformer Bushings	X	X	X	X	X	X	X	X	X	X	X	X			
Cable Terminators	X	X	X	X	X	X	X	X	X	X	X	X			

MANUAL SWITCHES

Inspected x													COMMENTS	DATE CORRECTED	CORRECTED BY
	January	February	March	April	May	June	July	August	September	October	November	December			
Overall Rating	0	0	0	0	0	0	0	0	0	0	0	0			
Properly Labeled	X	X	X	X	X	X	X	X	X	X	X	X			
Ground Connections	X	X	X	X	X	X	X	X	X	X	X	X			
Positioning and Alignment	X	X	X	X	X	X	X	X	X	X	X	X			
Bushings and Supports	X	X	X	X	X	X	X	X	X	X	X	X			

MONTHLY SUBSTATION INSPECTION SUMMARY

INSPECTED BY: *Carly Mills*

DATE:

SUBSTATION: ARGYLE

HIGH & LOW VOLTAGE BUSS WORK		January	February	March	April	May	June	July	August	September	October	November	December	COMMENTS	DATE CORRECTED	CORRECTED BY
Overall Rating	inspected	0	0	0	0	0	0	0	0	0	0	0	0			
Bushing, Insulator, Arrestor, and Supports	X	X	X	X	X	X	X	X	X	X	X	X	X			
Bird Nests	X	X	X	X	1	X	X	X	X	X	X	X	X			
Transformer Bushings	X	X	X	X	X	X	X	X	X	X	X	X	X			
Cable Terminators	X	X	X	X	X	X	X	X	X	X	X	X	X			

MANUAL SWITCHES		January	February	March	April	May	June	July	August	September	October	November	December	COMMENTS	DATE CORRECTED	CORRECTED BY
Overall Rating	inspected	0	0	0	0	0	0	0	0	0	0	0	0			
Overall Rating	0	0	0	0	0	0	0	0	0	0	0	0	0			
Property Labeled	X	X	X	X	X	X	X	X	X	X	X	X	X			
Ground Connections	X	X	X	X	X	X	X	X	X	X	X	X	X			
Positioning and Alignment	X	X	X	X	X	X	X	X	X	X	X	X	X			
Bushings and Supports	X	X	X	X	X	X	X	X	X	X	X	X	X			

YARD & FENCE		January	February	March	April	May	June	July	August	September	October	November	December	COMMENTS	DATE CORRECTED	CORRECTED BY
Overall Rating	inspected	0	0	0	0	0	0	0	0	0	0	0	0			
Overall Rating	0	0	0	0	0	0	0	0	0	0	0	0	0			
Fire Extinguisher Charged	X	X	X	X	X	X	X	X	X	X	X	X	X			
Fence Ground Connections	X	X	X	X	X	X	X	X	X	X	X	X	X			
Fence Secured	X	X	X	X	X	X	X	X	X	X	X	X	X			
Security and Emergency Lights	X	X	X	X	X	X	X	X	X	X	X	X	X			
Site Base and Grade	X	X	X	X	X	X	X	X	X	X	X	X	X			
Standing Water	X	X	X	X	X	X	X	X	X	X	X	X	X			
Warning Signs	X	X	X	X	X	X	X	X	X	X	X	X	X			